

### **REMARKS**

Claims 1-18 are pending in this application. The Examiner rejected Claims 1-18. In particular, the Examiner rejected Claims 1-3, 7, 8, 11, and 13-18 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,129,913 ("the Ruppert patent"). The Examiner further rejected Claim 4 under 35 U.S.C. § 103(a) as being unpatentable over Ruppert in view of U.S. Patent No. 6,394,893 ("the Scholz patent"). The Examiner further rejected Claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Ruppert in view of U.S. Patent No. 5,899,122 ("the Court patent"). The Examiner further rejected Claims 6 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Ruppert in view of U.S. Patent No. 5,314,435 ("the Green patent"). The Examiner further rejected Claims 9 and 10 under 35 U.S.C. § 103(a) as being unpatentable over Ruppert in view of U.S. Patent No. 4,191,191 ("the Auburn patent"). In view of the following discussion, reconsideration of the application is respectfully requested.

### **REJECTION OF CLAIMS 1-3, 7, 8, 11, 13-18 UNDER 35 U.S.C. § 102(b)**

The Examiner rejected Claims 1-3, 7, 8, 11, 13-18 under 35 U.S.C. § 102(b) as being anticipated by Ruppert. In view of the following discussion, Applicant respectfully traverses this rejection.

Applicant respectfully submits that the claims as previously pending are patentably distinguished over the Ruppert patent, the other cited references or any combination thereof. Claims 1 and 15, however, have been amended without altering their scope in order to clarify the features of Applicants' inventions. These claim amendments are not made for patentability purposes, and it is believed that the claims would satisfy the statutory requirements for patentability without the entry of such amendments.

#### **Claim 1**

Ruppert does not disclose the use of an anvil where the anvil is at least as wide as the largest exterior cutting dimension of the cutter. Further, Ruppert does not teach an anvil that serves as a positive stop for the cutter. In addition, Ruppert does not teach

a cutter that does not pass beyond the proximal surface of the anvil, nor does Ruppert teach a cutter that, in its lowest energy state, rests against the anvil with a net compressive force.

Rather, Ruppert appears to disclose an apparatus adapted for cutting holes in a body vessel or hollow organ comprising a cutting blade **15**, a controlled force **21** to advance the cutting blade **15**, against a second cutting blade **26** with cutting blade edge **27**. The second cutting blade **26** is, however, smaller in diameter than the cutting blade **15** and passes inside cutting blade **15** to generate a scissors motion. In Figures 1, 2, and 3 of Ruppert, the cutting blade **26** is shown to have a smaller diameter than cutting blade **16**.

In contrast, in at least an embodiment of the present invention, the anvil **16** is a flat surface disposed distally to the cutter **12** and aligned in a plane generally perpendicular to the axis of the shaft **14**. The anvil **16** is at least as wide as the largest exterior cutting dimension of the cutter **12**. In this way, the anvil **16** serves to positively stop the cutter **12**. The cutter **12** is advanced **against** the anvil **16** during the cutting procedure. The cutter **12** **does not pass beyond the proximal surface of the anvil 16**. In its lowest energy or inactive state, the cutter **12** **rests against the anvil 16** with a net compressive force and the spring **22** expanded to its maximum allowable amount. The compressive force between the closed cutter **12** and the anvil **16** serves to maintain contact between the surfaces and promote cutting at the end of the stroke. Further, Figures 1A and 1B of the present invention, clearly show the cutter **12** as being smaller in diameter than the anvil **16** and the anvil **16** forming a positive stop so that the cutter **12** does not pass beyond the proximal end of the anvil **16**. See page 13, lines 3-16 and Figures 1A and 1B (emphasis added).

In summary, Ruppert's surgical punch uses a scissors motion to cut tissue such that Ruppert's anvil passes by the cutter. In contrast, the Applicant's punch uses a positive stop for the cutter against the face of the anvil to cut tissue such that the cutter does not pass beyond the face of the anvil.

Because the Ruppert reference, does not disclose, teach or suggest the use of an anvil that is at least as wide as the largest exterior cutting dimension of the cutter or

where the cutter does not pass beyond the proximal surface of the anvil, or where the anvil serves as a positive stop for the cutter, the Applicant asserts that Claim 1 is not anticipated by Ruppert. It appears that Ruppert's use of the word "against" is different than the Applicant's use of the word "against" in Claim 1. Ruppert's definition of "against", in the Background of the Invention, appears to be "toward" since his anvil does not form a positive stop for the cutter. Applicant's use of the word "against" in Claim 1 is such that the cutter stops at the anvil as described on page 13, lines 3-16. Applicant therefore respectfully submits that Claim 1 is patentably distinguished over the cited references and Applicant respectfully requests allowance of Claim 1.

#### **Claims 2, 3, 7, 8, and 11**

Claims 2, 3, 7, 8, and 11, which depend from Claim 1, are believed to be patentable for the same reasons articulated above with respect to Claim 1, and because of the additional features recited therein.

#### **Claim 13**

Ruppert does not disclose the use of an anvil where the anvil is at least as wide as the largest exterior cutting dimension of the cutter. Further, Ruppert does not teach an anvil that serves as a positive stop for the cutter. In addition, Ruppert does not teach a cutter that does not pass beyond the proximal surface of the anvil, nor does Ruppert teach a cutter that, in its lowest energy state, rests against the anvil with a net compressive force.

Rather, Ruppert appears to disclose an apparatus adapted for cutting holes in a body vessel or hollow organ comprising a cutting blade **15**, a controlled force **21** to advance the cutting blade **15**, against a second cutting blade **26** with cutting blade edge **27**. The second cutting blade **26** is, however, smaller in diameter than the cutting blade **15** and passes inside cutting blade **15** to generate a scissors motion. In Figures 1, 2, and 3 of Ruppert, the cutting blade **26** is shown to have a smaller diameter than cutting blade **16**.

In contrast, in at least an embodiment of the present invention, the anvil **16** is a flat surface disposed distally to the cutter **12** and aligned in a plane generally

perpendicular to the axis of the shaft **14**. The anvil **16** is at least as wide as the largest exterior cutting dimension of the cutter **12**. In this way, the anvil **16** serves to positively stop the cutter **12**. The cutter **12** is advanced **against** the anvil **16** during the cutting procedure. The cutter **12** **does not pass beyond the proximal surface of the anvil 16**. In its lowest energy or inactive state, the cutter **12** **rests against the anvil 16** with a net compressive force and the spring **22** expanded to its maximum allowable amount. The compressive force between the closed cutter **12** and the anvil **16** serves to maintain contact between the surfaces and promote cutting at the end of the stroke. Further, Figures 1A and 1B of the present invention, clearly show the cutter **12** as being smaller in diameter than the anvil **16** and the anvil **16** forming a positive stop so that the cutter **12** does not pass beyond the proximal end of the anvil **16**. See page 13, lines 3-16 and Figures 1A and 1B (emphasis added).

In summary, Ruppert's surgical punch uses a scissors motion to cut tissue such that Ruppert's anvil passes by the cutter. In contrast, the Applicant's punch uses a positive stop for the cutter against the face of the anvil to cut tissue such that the cutter does not pass beyond the face of the anvil.

Because the Ruppert reference, does not disclose, teach or suggest a method of cutting tissue using an anvil, whose outer diameter is no less than the outer diameter of the cutting blade, or where the cutter does not pass beyond the proximal surface of the anvil, or where the anvil serves as a positive stop for the cutter, the Applicant asserts that Claim 13 is not anticipated by Ruppert. It appears that Ruppert's use of the word "against" is different than the Applicant's use of the word "against" in Claim 13. Ruppert's definition of "against", in the Background of the Invention, appears to be "toward" since his anvil does not form a positive stop for the cutter. Applicant's use of the word "against" in Claim 13 is such that the cutter stops at the anvil as described on page 13, lines 3-16. Applicant therefore respectfully submits that Claim 13 is patentably distinguished over the cited references and Applicant respectfully requests allowance of Claim 13.

#### **Claim 14**

Claim 14 which depends from Claim 13, is believed to be patentable for the same reasons articulated above with respect to Claim 13, and because of the additional features recited therein.

#### **Claim 15**

Ruppert does not disclose the use of an anvil where the anvil is at least as wide as the largest exterior cutting dimension of the cutter. Further, Ruppert does not teach an anvil that serves as a positive stop for the cutter. In addition, Ruppert does not teach a cutter that does not pass beyond the proximal surface of the anvil, nor does Ruppert teach a cutter that, in its lowest energy state, rests against the anvil with a net compressive force.

Rather, Ruppert appears to disclose an apparatus adapted for cutting holes in a body vessel or hollow organ comprising a cutting blade **15**, a controlled force **21** to advance the cutting blade **15**, against a second cutting blade **26** with cutting blade edge **27**. The second cutting blade **26** is, however, smaller in diameter than the cutting blade **15** and passes inside cutting blade **15** to generate a scissors motion. In Figures 1, 2, and 3 of Ruppert, the cutting blade **26** is shown to have a smaller diameter than cutting blade **16**.

In contrast, in at least an embodiment of the present invention, the anvil **16** is a flat surface disposed distally to the cutter **12** and aligned in a plane generally perpendicular to the axis of the shaft **14**. The anvil **16** is at least as wide as the largest exterior cutting dimension of the cutter **12**. In this way, the anvil **16** serves to positively stop the cutter **12**. The cutter **12** is advanced **against** the anvil **16** during the cutting procedure. The cutter **12** **does not pass beyond the proximal surface of the anvil 16**. In its lowest energy or inactive state, the cutter **12** **rests against the anvil 16** with a net compressive force and the spring **22** expanded to its maximum allowable amount. The compressive force between the closed cutter **12** and the anvil **16** serves to maintain contact between the surfaces and promote cutting at the end of the stroke. Further, Figures 1A and 1B of the present invention, clearly show the cutter **12** as being smaller in diameter than the anvil **16** and the anvil **16** forming a positive stop so that the cutter

**12** does not pass beyond the proximal end of the anvil **16**. See page 13, lines 3-16 and Figures 1A and 1B (emphasis added).

In summary, Ruppert's surgical punch uses a scissors motion to cut tissue such that Ruppert's anvil passes by the cutter. In contrast, the Applicant's punch uses a positive stop for the cutter against the face of the anvil to cut tissue such that the cutter does not pass beyond the face of the anvil.

Because the Ruppert reference, does not disclose, teach or suggest the use of an anvil that is at least as wide as the largest exterior cutting dimension of the cutter or where the cutter does not pass beyond the proximal surface of the anvil, or where the cutter serves as a positive stop for the anvil, the Applicant asserts that Claim 15 is not anticipated by Ruppert. It appears that Ruppert's use of the word "against" is different than the Applicant's use of the word "against" in Claim 15. Ruppert's definition of "against", in the Background of the Invention, appears to be "toward" since his anvil does not form a positive stop for the cutter. Applicant's use of the word "against" in Claim 15 is such that the anvil stops at the cutter as described on page 18, lines 13-21. Applicant therefore respectfully submits that Claim 15 is patentably distinguished over the cited references and Applicant respectfully requests allowance of Claim 15.

#### **Claims 16 -18**

Claims 16-18 which depend from Claim 15 are believed to be patentable for the same reasons articulated above with respect to Claim 15, and because of the additional features recited therein.

**REJECTION OF CLAIMS UNDER 35 U.S.C. § 103(a)**

The Examiner rejected Claim 4 under 35 U.S.C. § 103(a) as being unpatentable over Ruppert in view of Scholz. The Examiner further rejected Claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Ruppert in view of Court. The Examiner further rejected Claims 6 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Ruppert in view of Green. The Examiner further rejected Claims 9 and 10 under 35 U.S.C. § 103(a) as being unpatentable over Ruppert in view of Auburn. In view of the following discussion, Applicant respectfully traverses this rejection.

**Claim 4, 5, 6, 9, 10, and 12**

Claims 4, 5, 6, 9, 10, and 12, which depend from Claim 1, are believed to be patentable for the same reasons articulated above with respect to Claim 1, and because of the additional features recited therein.

**CONCLUSION**

In view of the forgoing, the present application is believed to be in condition for allowance, and such allowance is respectfully requested. If further issues remain to be resolved, the Examiner is cordially invited to contact the undersigned such that any remaining issues may be promptly resolved.

Respectfully submitted,

Dated: 10-30-02

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**Version With Markings to Show Changes Made**

Please amend the specification, page 4, line 20 through page 5, line 18, as follows:

Figure 1A illustrates a side view of the trephine, punch or coring tool of the current invention with the cutter fully retracted, according to aspects of an embodiment of the invention.

Figure 1B illustrates a side view of the trephine, punch or coring tool of the current invention with the cutter fully advanced against the anvil, according to aspects of an embodiment of the invention.

Figure 2 illustrates the trephine, punch or coring tool applied to the apex of the ventricle of the heart prior to advancing the cutting blade, according to aspects of an embodiment of the invention.

Figure 3 illustrates the trephine, punch or coring tool after the blade has been advanced through the apex of the ventricular wall of the heart, according to aspects of an embodiment of the invention.

Figure 4 illustrates the ventricular wall after removal of the trephine, punch or coring tool and the excised tissue, according to aspects of an embodiment of the invention.

Figure 5A illustrates another embodiment of a side view of the trephine, punch or coring tool with the anvil fully advanced, according to aspects of an embodiment of the invention.

Figure 5B illustrates a side view of the trephine, punch or coring tool with the anvil fully retracted against the cutter, according to aspects of an embodiment of the invention.

Please amend the claims as follows:

1. (Amended) An apparatus adapted for cutting holes in a body vessel or hollow organ comprising:
  - a cutting blade,
  - a controlled force to advance the cutting blade, and



an anvil having a proximal surface against which the cutting blade is advanced wherein the cutting blade does not pass beyond the proximal surface of the anvil.

15. (Amended) An apparatus adapted for cutting holes in a body vessel or hollow organ comprising:

an anvil,

a cutting blade against which the anvil is advanced wherein the anvil positively stops against the cutting blade, and

a controlled force to advance the anvil.